



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/415,481	10/08/1999	ANDREW C. HSU	20864.00700	4880

29906 7590 08/23/2005

INGRASSIA FISHER & LORENZ, P.C.  
7150 E. CAMELBACK, STE. 325  
SCOTTSDALE, AZ 85251

EXAMINER
----------

ABDULSELAM, ABBAS I

ART UNIT	PAPER NUMBER
----------	--------------

2677

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/415,481

Applicant(s)

HSU ET AL.

Examiner

Abbas I. Abdulsalam

Art Unit

2677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 39-43,45,55 and 60-87 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 39-43,45,55,60-63,86 and 87 is/are allowed.
- 6) ☒ Claim(s) 64-81 is/are rejected.
- 7) ☒ Claim(s) 82-85 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is in response to communication filed on 05/06/05. Claims 39-43, 45, 55 and 60-87 are pending. Claims 1-38, 44, 46-54 and 56-59 are cancelled.

#### ***Allowable Subject Matter***

2. Claims 39-43, 45, 55, 60-63, and 86-87 are allowed.
3. Claims 82-85 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

4. Applicant's arguments filed on 05/06/05 with respect to claims 64-86 have been fully considered but they are not persuasive.

Regarding claims 64 and 73, applicant argues that the cited reference does not teach a transparent touchpad directly disposed on said top polarizer layer. However, as shown in the art rejection below, However, Fuji teaches that it is possible to arrange a polarizing plate between a touch panel (8) and a liquid crystal cell (7). See col. 6, lines 65-67. Also note that conductive films (6) and conductive substrates (3, 4) as shown in Fig. 1 constitute a touch panel (8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Fujii's polarizing plate (11) between a touch panel (18) and a liquid crystal cell (17) of Fig. 3; because it is possible to arrange a polarizing plate in various orientations (col. 9, lines 31-45) including between a touch panel and a liquid crystal cell (col.6, lines 65-67).

Art Unit: 2677

Regarding claim 69, applicant argues that the cited reference does not teach a transparent touchpad directly disposed on the polarizer layer. However, as shown in the art rejection below Jackson teaches that the screen overlay 10 is attached by suitable means to the display screen of the CRT 12, and Greanias teaches as shown on Fig. 3 a lower conductor set (9), which is disposed over the viewing surface of the display (col. 9, lines 49-50).

It would have been obvious to one of skill in the art to incorporate Greanias' conductor set (91) shown in Fig. 3 inside Jackson's touch screen overlay arrangement shown in Fig. 1; because the use of conductors helps achieve a touch overlay for improved touch sensitivity as taught by Greanias (col. 15, lines 43-51).

Regarding claim 77, applicant argues that the reference does not teach a transparent touchpad disposed on the surface layer. However, as shown in the art rejection below, Eichelberger teaches a capacitive touch entry panel 10 comprises a substrate, or panel, 11 of a transparent insulative material, such as glass and the like (col. 3, lines 6-9).

Regarding claim 78, applicant argues that the cited reference does not teach a transparent touchpad directly disposed on a passive graphical overlay. However, as shown in the art rejection below, Combs teaches that the X -Y coordinate array could be disposed below or as a part of the overlay (16). See col. 4, lines 11-15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Combs' X -Y coordinate array which could optionally be disposed as part of the overlay (16) in a desired connectivity inside an overlay housing shown in Fig. 1; because the X-Y coordinate array helps transmit touch signals to operate the overlay in finger touch (col. 4, lines 11-15).

Regarding 79-81, applicant argues that the cited reference does not teach a capacitive sensor having substantially uniform transmissivity within the active area. However, as shown in the art rejection below, Clancy teaches projection of images through appropriate arrangement of the traces (72, 76) such that the images may be projected by making the image sufficiently bold, positioning it appropriately, and sizing the array of traces 72 and 76 to leave substantial room for light to project through the array. See col. 5, lines 29-32. It would have been obvious to utilize capacitive sensor with respect to the area of application in a desired manner.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 64-68 rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. (USPN 6411344).

Regarding claim 64, Fuji teaches a system comprising a liquid crystal display having a top polarizer layer (11); and a transparent touchpad directly (18) disposed on said top polarizes layer, including a plurality of first conductors disposed along an X axis directly on said top

Art Unit: 2677

polarizer layer; and a plurality of second conductors disposed along a Y axis and insulated from said plurality of first conductors disposed along said X axis (Fig. 3 and col. 8, lines 35-51).

Fujii does not specifically teach the plurality of conductors being disposed directly over top polarizer layer.

Fuji on the other hand teaches that it is possible to arrange a polarizing plate shown in Fig. 3 touch panel (8) and a liquid crystal cell (7). See col. 6, lines 65-67. Note that conductive films (6) and conductive substrates (3, 4) as shown in Fig. 1 constitute a touch panel (8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Fujii's polarizing plate (11) between a touch panel (18) and a liquid crystal cell (17) of Fig. 3; because it is possible to arrange a polarizing plate in various orientations (col. 9, lines 31-45) including between a touch panel and a liquid crystal cell (col.6, lines 65-67).

Regarding claim 65, Fujii teaches an insulating layer insulates said plurality of first conductors disposed along said X axis from said plurality of second conductors disposed along said Y axis (col. 6, lines 46-51).

Regarding claim 66, Fuji teaches an adhesive layer disposed on one of said first and said second plurality of conductors (col. 6, lines 46-56).

Regarding claim 67, Fuji teaches a transparent layer disposed on said adhesive layer (col. 6, lines 46-56).

Regarding claim 68, Fujii teaches a system comprising a liquid crystal display having a top polarizer layer (11); and a transparent touchpad directly (18) disposed on said top polarizer layer, including a plurality of conductors disposed along at least one axis directly on said top polarizer layer (Fig. 3 and col. 8, lines 35-51).

Fujii does not specifically teach the plurality of conductors being disposed directly over top polarizer layer.

Fuji on the other hand teaches that it is possible to arrange a polarizing plate shown in Fig. 3 touch panel (8) and a liquid crystal cell (7). See col. 6, lines 65-67. Note that conductive films (6) and conductive substrates (3, 4) as shown in Fig. 1 constitute a touch panel (8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Fujii's polarizing plate (11) between a touch panel (18) and a liquid crystal cell (17) of Fig. 3; because it is possible to arrange a polarizing plate in various orientations (col. 9, lines 31-45) including between a touch panel and a liquid crystal cell (col.6, lines 65-67).

6. Claims 69-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson (USPN 4931782) in view of Greanias et al. (5386219).

Regarding claim 69, Jackson teaches a system comprising: a cathode ray tube (12) having a glass envelope; and a transparent touchpad directly (12) disposed on said glass envelope,

Art Unit: 2677

including, a plurality of second conductors disposed along a Y axis and insulated from said plurality of first conductors disposed along said X axis (col. 5, lines 40-50 and Fig. 1).

However, Jackson does not teach “a plurality of first conductors disposed along an X axis directly on said glass envelope”.

Greanias on the other teaches as shown on Fig. 3 a lower conductor set (9), which is disposed over the viewing surface of the display (col. 9, lines 49-50).

It would have been obvious to one of skill in the art to incorporate Greanias' conductor set (91) shown in Fig. 3 inside Jackson's touch screen overlay arrangement shown in Fig. 1; because the use of conductors helps achieve a touch overlay for improved touch sensitivity as taught by Greanias (col. 15, lines 43-51).

Regarding claim 70, Jackson teaches an insulating layer insulates said plurality of first conductors disposed along said X-axis from said plurality of second conductors disposed along said Y axis.

Regarding claim 71, Jackson teaches an adhesive layer disposed on one of said first and said second plurality of conductors (Fig. 6 and col. 8, lines 57-67).

Regarding claim 72, Jackson teaches a transparent layer disposed on said adhesive layer (Fig. 6 and col. 8, lines 57-67).

7. Claims 73-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clancy et al. (USPN 5952998) in view of Fuji et al. (USPN 6411344).



Regarding claim 73, Clancy discloses a system comprising: a liquid crystal display; and a transparent touchpad directly (22) disposed on said liquid crystal display, including a plurality of first conductors (74) disposed along an X axis directly on said liquid crystal display; and a plurality of second conductors (72) disposed along a Y axis and insulated from said plurality of first conductors disposed along said X axis (col. 4, lines 36-42, Fig. 7(20) and Fig. 8 (72, 74)).

Clancy does not teach a plurality of second conductors being insulated from first conductors.

Fujii on the other hand teaches that in order to impart the function of a touch panel, a spacer, an electrode, an insulating film, etc. are formed on each of the two transparent conductive substrates (col. 6, lines 46-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Fujii's insulating film inside Clancy's arrangement of plurality of conductors (72, 74) shown in Fig. 8; because an insulating film permits transparent conductive substrates to perform the function of the touch panel as taught by Fujii (col. 8, lines 56-59).

Regarding claim 74, Fuji teaches an insulating layer insulates said plurality of first conductors disposed along said X axis from said plurality of second conductors disposed along said Y axis (col. 6, lines 46-56).

Regarding claim 75, Fuji teaches an adhesive layer disposed on one of said first and said second plurality of conductors (col. 6, lines 46-56).

Art Unit: 2677

Regarding claim 76, Fuji teaches a transparent layer disposed on said adhesive layer (col. 6, lines 46-56).

8. Claim 77 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eichelberger (USPN 4290052).

Regarding claim 77, Eichelberger teaches in a system comprising: a fingerprint sensor having a surface layer; and a transparent touch pad disposed on said surface layer, including a plurality of conductors disposed along at least one axis directly on said surface layer (Fig. 1a and col. 3, lines 6-15).

Eichelberger does not specifically teach the use of a fingerprint sensor.

Eichelberger on the other hand teaches the use of touch pad sensor with respect to a fingertip. See col. 1, lines 10-13.

Therefore it would have been to one of ordinary skill in the art at the time the invention was made to utilize Eichelberger's touch pad sensor with respect to fingertip inside a capacitive touch panel shown in Fig. 1 for the purpose of implementing a touch entry system (col. 1, lines 55-60).

9. Claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over Combs et al. (USPN 5909211).

Regarding claim 78, Combs teaches a system comprising: a passive graphic underlay but having no electrical interaction therewith the transparent touchpad directly physically (Fig. 1 (10, 12)) disposed on said graphic underlay, including a plurality of conductors (col. 4, lines 15-20 and Fig. 5) disposed along at least one axis directly on said passive graphic underlay (col.2, lines 3-5).

Combs does not specifically teach a “passive graphic underlay”.

Combs on the other hand teaches a touch work pad and detection system (Fig. 5) with an overlay disposed above the workpad which comprising X and Y coordinate pressure sensitive conductors. Combs also teaches that the X -Y coordinate array could be disposed below or as a part of the overlay (16). See col. 4, lines 11-15.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Combs’ X -Y coordinate array which could optionally be disposed as part of the overlay (16) inside an overlay housing shown in Fig. 1; because the X-Y coordinate array helps transmit touch signals to operate the overlay in finger touch (col. 4, lines 11-15).

10. Claim 79-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clancy et al. (USPN 5952998).

Regarding claim 79, Clancy teaches, substantially transparent capacitive sensor (col. 4, lines 22-27) comprising: an active area configured to accept input from a conductive object, said active area including a plurality of substantially transparent conductive traces (72, 74 and Fig. 8)

disposed in an X axis and a plurality of substantially transparent conductive traces disposed in a Y axis (Fig. 8 and col. 1, lines 63-67).

However, Clancy does not specifically teach the capacitive sensor having a substantially uniform transmissivity within said active area.

Clancy on the other hand teaches projection of images through appropriate arrangement of the traces (72, 76) such that the images may be projected by making the image sufficiently bold, positioning it appropriately, and sizing the array of traces 72 and 76 to leave substantial room for light to project through the array. See col. 5, lines 29-32.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Clancy's image positioning and sizing an array of traces (72, 76) inside touch screen-display system shown in Fig. 7 for the purpose of achieving adequate visualization (col. 5, lines 32-33).

Regarding claim 80, Clancy teaches said plurality of substantially transparent conductive traces disposed in said X axis and said plurality of substantially transparent conductive traces disposed in said Y axis together substantially occupy said active area (col. 5, lines 5-10 and Fig. 8).

Regarding claim 81, Clancy teaches plurality of substantially transparent conductive traces disposed in said X-axis and said plurality of substantially transparent conductive traces disposed in said Y axis are aligned to maximize transparency (col. 1, lines 37-40).

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I. Abdulsalam whose telephone number is (571) 272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 2677

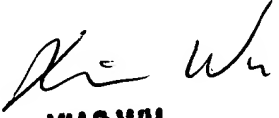
applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas Abdulsalam

Examiner

Art Unit 2677

August 21, 2005

  
**XIAO WU**  
**PRIMARY EXAMINER**